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CIMICIFUGA RACEMOSA IN MASSACHUSETTS.

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(Plate 132)

In October, 1919, I found in Sheffield, Berkshire County, Massachusetts, the withered stalk of a plant which I identified as Cimicifuga racemosa (L.) Nutt. It was in wild, steep rocky woods, across the river, and about two miles from the village. In the following year, on July 19, I came upon the plant about a mile from the first station growing scattered in beautiful open woods which sloped steeply down to a brook. It was then in full bloom, and the tall slender plants with the long spikes of white flowers lit up the sombre landscape and were very attractive. Ten days later I visited the first station, where I found the plants now growing vigorously and in great profusion. A photograph here reproduced illustrates the extent of the colony, the height of the plants and their environment. Both localities are quite remote from habitations and the plants appear to be indigenous.

Cimicifuga racemosa has rarely, if ever, been found in New England north of Connecticut, except in cultivation or as a garden escape. It is not in the Flora of Vermont (1915). In the Catalogue of Plants of Connecticut (1910) its occurrence is mentioned at "Norfolk, plentiful at one locality but probably introduced; at Oxford common; and frequent throughout the southwestern part of the state." The Sheffield stations are about five miles north of the Connecticut state line.

In the Gray Manual (1908) the range given is "s. N.E. to Wisc. and s.w., cultivated and escaped eastw." In his Report on the Herbaceous Plants of Massachusetts (1840) the Rev. Chester Dewey describes and mentions Cimicifuga racemosa, but only as "cultivated in the gardens of the Shakers."

It is natural that a plant so conspicuous and ornamental should be transplanted into gardens and thence in time again have run wild beyond its normal range. Two extralimital collections in the herbarium of the New England Botanical Club are probably of this class, viz: one by Parlin, Sept. 6, 1899, from "N. Berwick, Me.; growing in an orchard spreading from planted roots;" the other by John Murdoch, Jr., July 22, 1913, from "Bernardston, Mass., woods in E. part of town." A collection by R. Hoffmann from New Marlboro, Mass., a town adjoining Sheffield, and also on the Connecticut state line, may be indigenous, though found "persisting for years under a hedge-row." Bernardston, on the other hand, is in Franklin County, sixty miles northeast of Sheffield, on the Vermont line. Mr. Murdoch died in 1915, and his herbarium, with a duplicate plant and label, is now in the Field Museum of Natural History at Chicago.

In the catalogue of plants growing without cultivation in the vicinity of Amherst College, published by Prof. Edward Hitchcock in 1829, our plant is recorded, on his authority, from Goshen, Mass.; and this record is repeated as late as 1913 by Prof. George E. Stone of the Massachusetts Agricultural College at Amherst in his "List of Plants growing without cultivation in Franklin, Hampshire and Hampden Counties." Goshen is a small town in Hampshire County, southwest of Bernardston. Seeking to confirm so definite, though ancient a record as this I wrote to Prof. Alfred S. Goodale, who kindly reported to me that "a careful inspection of our plant collection at Amherst College fails to show a specimen from our vicinity. I have also examined what is left of Hitchcock's own collection and if it was originally there, it has disappeared from it." He adds, "I have not collected it myself in this region."

In the brief search which I have made, with results stated above, there is little to show the presence of the "Bugbane" or "Black Snakeroot" as a native of Massachusetts, except the stations at Sheffield. Possibly however, this note may be productive of infor.

mation of other collections, either in the field or from herbaria, with data which may verify not only its occurrence here but may determine its status as indigenous or as "cultivated and escaped eastward."

Dorchester, Massachusetts.

A CRITICAL REVISION OF HYDRANGEA ARBORESCENS.

HAROLD ST. JOHN.

Through the discriminating field observations of Mr. Charles C. Deam, the writer has had his attention directed to the conspicuously different plants that are now treated as Hydrangea arborescens L. The tendency of the present day authors is to withhold any recognition of these various forms. On the other hand, the writers of the early floras of eastern North America were familiar with some of them and gave them names. Rafinesque, for instance, made eight species out of the plant now considered to be H. arborescens. The others were more conservative. As was the case in a previous study of the variations of a polymorphic species,1 a treatment very similar to that here presented is found in Torrey and Gray's Flora of North America. Within the species itself are recognized several subdivisions, which in most cases are clearly distinguishable by definite characters and by having different ranges, but they are shown to be of less than specific value by the existence of specimens having intermediate characters, and by the fact that their ranges overlap.

Linnaeus in founding *H. arborescens*² based it solely on HYDRAN-GEA. Anonymos floribus albis parvis, etc. of Gronovius.³ This description was drawn from the Clayton specimen, no. 79, from Virginia. It is a low shrub with large cordate acuminate glabrous leaves. By using a hand lens it appears that the leaves of this shrub of the stream-banks of Virginia are essentially but not absolutely glabrous, for the principal nerves bear on the lower surface a short puberulence. This same character holds throughout the species and its varieties; in all cases the leaves are puberulent on the prin-

¹ Lathyrus venosus Muhl., see Butters and St. John, Rhodora xix. 156 (1917).

² Sp. Pl. i. 397 (1753).

³ Fl. Virginica i. 50 (1739).